UNIQUE IDENTIFICATION (UID)

Unique Identification (UID) of Tangible Items

April 24, 2003

Purpose of UID

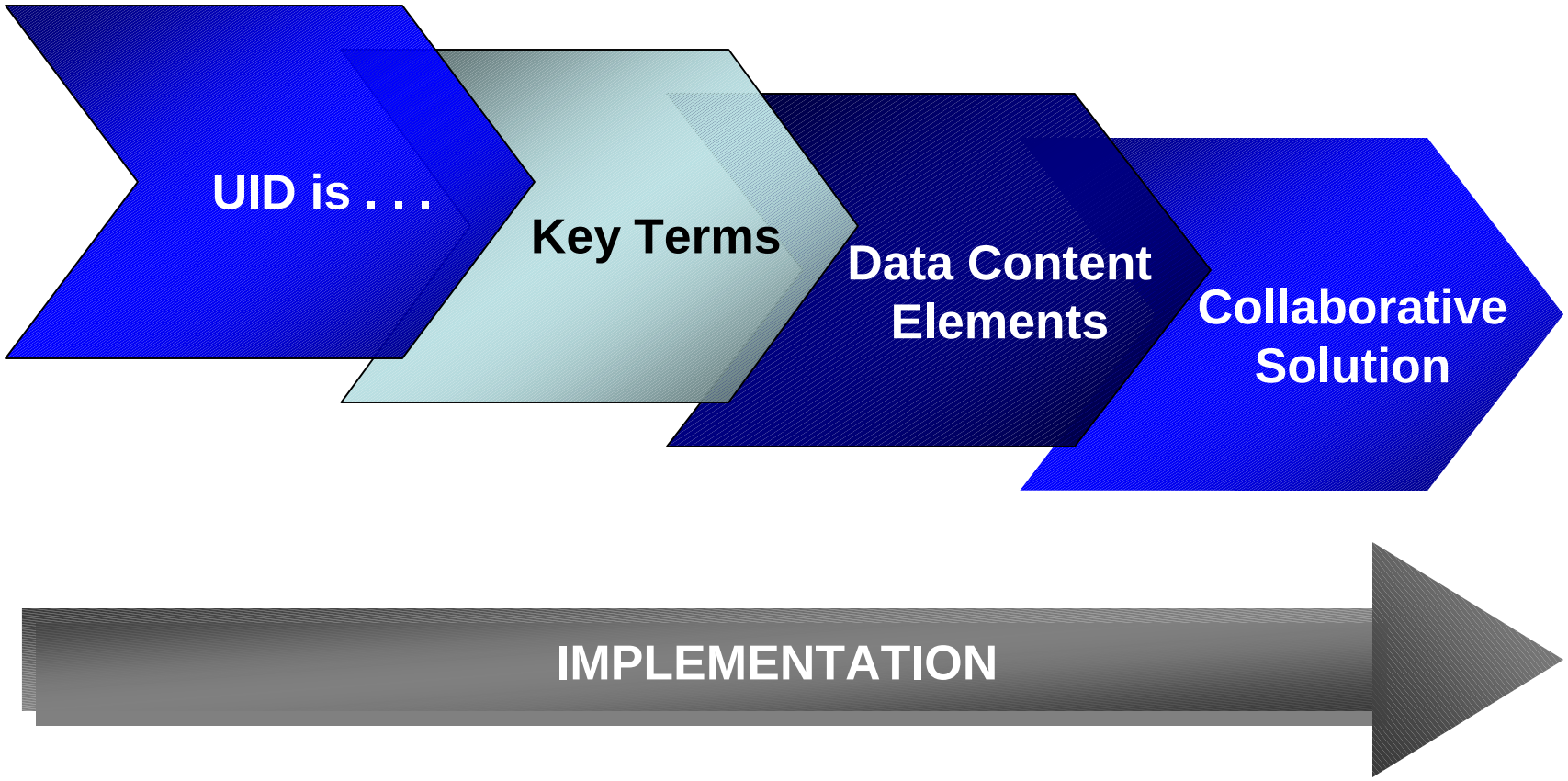
- To integrate item data across government and industry asset management systems, resulting in:
  - Improved data quality and global interoperability
  - Rationalization of systems and infrastructure
- To improve item management and accountability
- To improve asset visibility and life-cycle management through life cycle traceability
- To enable more accurate audit opinions on the property, plant, and equipment and operating materials and supplies portions of financial statements

Efforts Underway

- The Department of Defense (DoD) established an Integrated Product Team (IPT) to achieve the following goals:
  - Identify the UID data standard
  - Develop an implementation strategy that is feasible and provides benefit in a reasonable timeframe
- The IPT consists of four efforts:
  - Standards
  - Implementation
  - Policy
  - DFAR Cases

Key Decisions to Date

The IPT Standards sub-team has agreed to the following elements since the first DoD policy memo was published in August of 2002.



UID is . . .

. . . the set of data for tangible assets that is globally unique and unambiguous, ensures data integrity and data quality throughout life, and supports multi-faceted business applications and users.

Key Terms

- **Enterprise**: The entity responsible for assigning the unique identifier (UID) to a tangible asset
- **Registration (or Controlling) Authority**: An organization responsible for assigning a non-repeatable identifier to an enterprise
- **Enterprise Identifier**: A code that is uniquely assigned to an enterprise by a registration (or controlling) authority
- **Serial Number**: A code assigned by the enterprise to an item that provides for the differentiation of that item from any other like or unlike item. Serial numbers can be unique within the enterprise or unique within the part number.
- **Original Part Number**: A code assigned by the enterprise at asset birth to a class of items with the same form, fit, function, and interface

Data Content Elements

- For items that are serialized within the enterprise, the UID is a combination of the **enterprise identifier** and the **serial number**
- For items that are serialized within the part number, the UID is a combination of the the **enterprise identifier**, the **serial number**, and the **original part number**
- To display data elements for human readability that are not part of the UID data content, (i.e., current part number) a separate mark/label should be used

Data Content Elements

	UID Construct #1	UID Construct #2
Based on current enterprise configurations	If items are serialized within the Enterprise:	If items are serialized within Part Number:
UID is derived by concatenating the data elements IN ORDER:	Enterprise ID Serial Number	Enterprise ID Serial Number Original Part Number
Data Marked on Assets Not Part of the UID (Separate Mark)	Current Part Number	Current Part Number

- Samples of how the marks may be constructed will be included in the policy memo for clarification

Business Rules

- The UID is constructed from the components of the existing asset marks/labels (see UID Constructs #1 and #2) and the business rule
- On the label, the UID is not required to be a separate data element, it is derived using a business rule from the data elements marked on the asset
- UID may be marked/labeled on the asset, in addition to the other required elements, if desired by the enterprise
- The policy must specify where the “UID construction business rule” must occur such that the UID can exist in the database and not as a separate mark/label on the part
- The asset marks/labels shall last for the life of the asset
- The serial number shall not change over the life of the asset

Business Rules

- The enterprise is responsible for guaranteeing unique serialization within the enterprise
- Semantics (or data “qualifiers”) will define each data element on the existing asset mark/label and tell the AIT whether to derive the UID using UID Construct #1 or #2
- All high capacity AIT shall conform to ISO/IEC 15434 syntax
- In the database, once the UID is created from the separate data elements:
  - It shall exist as a discrete data element
  - It shall not be parsed to determine the original elements
  - It shall be the primary pointer/key for the database

Collaborative Solution

- Agree to the use of three data standards:
  - ISO TS 21849 text element identifiers
  - UCC/EAN application identifiers
  - ISO/IEC 15418 data identifiers
- Create an interoperable environment across industries and government by using ISO/IEC 15434 as the UID syntax standard
- Use ISO TS 21849 as the UID standard for business rules, including how to construct the UID

Actions Underway

- Request of the ISO/IEC JTC1/SC31 that the modified TS 21849 TAGs be added to ISO/IEC 15434 as a new code format
- Modify TS 21849 to reference ISO/IEC 15434 syntax (data element separator, header, and terminator characters)
- Add Application Identifiers to the UCC/EAN specification in ISO/IEC 15418 to support multiple registration (or controlling) authorities and corresponding enterprise identifiers
- Modify the FACT specification in ISO/IEC 15418 to accommodate UCC/EAN enterprise identifiers
- Modify TS 21849 to support multiple registration (or controlling) authorities and corresponding enterprise identifiers